In the Claims

1. (Currently amended) A process for the preparation of poly(hydroxy fatty acids) comprising incubating a recombinant ~~organism~~ bacteria in a mineral medium under ~~a~~erobic conditions, expressing at least one fragment of the gene encoding the poly(hydroxy fatty acid) synthase from *Thiocapsa pfennigii* with a substrate carbon source, wherein the recombinant ~~organism~~ bacteria produces ~~a poly(hydroxy fatty acid)~~ poly(hydroxy fatty acids) and, the ~~poly (hydroxy fatty acid)~~ poly(hydroxy fatty acids) ~~is~~ are recovered.

2. (Previously presented) The process of claim 1, wherein the bacteria are pre-cultivated in a complex medium.

3. (Currently amended) The process of claim 1, wherein one also adds to the bacterial culture at least one additional carbon source which promotes growth, whereby the carbon source is selected from the group consisting of

citric acid, citric acid salts, citric acid esters, ~~and~~ citric acid lactones, octanoic acid, octanoic acid salts, octanoic acid esters, octanoic acid lactones, gluconic acid, gluconic acid salts, gluconic acid esters, gluconic acid lactones, hexoses, and combinations thereof.

4. (Previously presented) The process of claim 1, wherein the process is carried out in the form of a batch process, a fed-batch process, a two-step process or a continuous flow process.

5. (Currently amended) The process of claim 1, wherein the ~~poly(hydroxy fatty acid)~~ poly(hydroxy fatty acids) ~~is~~ are obtained in a concentration of approximately 15 to 70% by weight based on the dry mass of the bacterial cells.

6. (Previously presented) The process of claim 1, wherein the poly(hydroxy fatty acids) are obtained in the form of copolyesters with at least two subunits.

7. (Currently amended) The process of claim 1, wherein the recombinant bacteria are ~~cultivated~~ incubated at cell densities of up to 100 g of dry cellular mass per liter of bacterial nutrient medium.

8. (Previously presented) The process of claim 1, wherein one offers the substrate carbon source in excess.

9. (Previously presented) The process of claim 8, wherein one offers the substrate carbon source at a concentration of approximately 0.1 to 5% by weight.

10. (Currently amended) The process of claim 9, wherein one increases the concentration of the substrate carbon source in the culture medium in steps, optionally with ~~pre-cultivation~~ pre-incubation in the presence of an additional carbon source which does not serve as a substrate.

11. (Currently amended) The process of claim 10, wherein, one adds approximately 0.5% (weight/volume) of neutralized substrate carbon source after approximately 12 ~~h~~ hours and 24 ~~h~~ hours of pre-incubation at approximately 27°C to 35°C.

12. (Currently amended) The process of claim 1, wherein ~~cultivation~~ incubation takes place for approximately 24 h to 96 h.

13. (Previously presented) The process of claim 1, wherein the recombinant bacteria are cultivated under conditions deficient in an element wherein the element is selected from the group consisting of nitrogen, magnesium or phosphate.

14. (Currently amended) The process of claim 1, wherein the ~~harvested~~ recombinant bacteria are harvested and are broken open in order to obtain the poly(hydroxy fatty acids) that have been produced.

15. (Previously presented) The process of Claim 14, wherein the harvested recombinant bacteria are lyophilized and then extracted with an organic solvent, selected from the group consisting of chloroform or methylene chloride, in order to break open the recombinant bacteria and to obtain the poly(hydroxy fatty acids).

16. (Currently amended) The process of claim 15, wherein the extracted poly(hydroxy fatty acid) produced is precipitated by introducing a hydrophilic solvent, selected from the group consisting of water and a lower alcohol, wherein the product is obtained ~~in essentially pure form~~ by removing the hydrophilic solvent.

17. (Currently amended) The process of claim 14, wherein the harvested recombinant bacteria are broken open by means selected from the group consisting of detergents, a lytic enzyme cocktail, and a combination thereof wherein the bacterial cell grana, which

contain the ~~poly(hydroxy fatty acid)~~ poly(hydroxy fatty acids), ~~sediment to the bottom of the bio-reactor and~~ are collected ~~from there in order to be processed further~~.

18. (Previously presented) The process of claim 17, wherein the lytic enzyme cocktail contains enzymes which are selected from the group consisting of

lysozyme; proteases; other hydrolytic enzymes; and combinations thereof.

Claims 19-30 were previously canceled.

~~37~~ 31. (Currently amended) The process of claim 1, wherein the ~~poly(hydroxy fatty acid) is~~ poly(hydroxy fatty acids) are obtained in a concentration of approximately 15 to 50% by weight based on the dry mass of the bacterial cells.

~~38~~ 32. (Currently amended) The process of claim 1, wherein the ~~poly(hydroxy fatty acid) is~~ poly(hydroxy fatty acids) are obtained in a concentration of approximately 40% by weight based on the dry mass of the bacterial cells.

~~39~~ 33. (Currently amended) The process of claim 10, wherein~~, in each case,~~ one adds approximately 0.5% (weight/volume) of neutralized substrate carbon source at each step, after approximately 12 ~~h~~ hours and 24 ~~h~~ hours of incubation at approximately 30°C.

~~40~~ 34. (Currently amended) The process of claim 1, wherein ~~cultivation~~ incubation takes place for approximately 36 ~~h~~ hours to 72 ~~h~~ hours .

~~41~~ 35. (Currently amended) The process of claim 1, wherein ~~cultivation~~ incubation takes place for approximately 48 ~~h~~ hours to 72 ~~h~~ hours .

~~42~~ 36. (Currently amended) The process of claim 1 wherein the ~~poly(hydroxy fatty acid) polymer is~~ poly(hydroxy fatty acids) are comprised of one or more combinations of monomers selected from the group consisting of :

3-hydroxybutyric acid, 3 hydroxyvaleric acid and 4-hydroxy-valeric acid;

3-hydroxybutyric acid, 3 hydroxyvaleric acid, 4-hydroxy-valeric acid, 3-hydroxyhexanoic acid and 3-hydroxyoctanoic acid;

3-hydroxybutyric acid, 3-hydroxyhexanoic acid, 5-hydroxyhexanoic acid, and 3-hydroxyoctanoic acid;

3-hydroxybutyric acid, 3 hydroxyvaleric acid, 3-hydroxyhexanoic acid, 3-hydroxyheptanoic acid, 4-hydroxyheptanoic acid and 3-hydroxyoctanoic acid;

3-hydroxybutyric acid, 3 hydroxyhexanoic acid, 3-hydroxy-octanoic acid and 4-hydroxyoctanoic acid;

3-hydroxybutyric acid. 3-hydroxyhexanoic acid and 5-hydroxyhexanoic acid;

3-hydroxybutyric acid, 3-hydroxyvaleric acid, 3-hydroxy-heptanoic acid and 4-hydroxyheptanoic acid;

3-hydroxybutyric acid, 3 hydroxyvaleric acid, 3-hydroxyhexanoic acid, 3-hydroxyoctanoic acid, and 4-hydroxyoctanoic acid;

3-hydroxybutyric acid, 3-hydroxyhexanoic acid and 4-hydroxyhexanoic acid; and

3-hydroxybutyric acid, and 5-hydroxyhexanoic acid.

37. (New) A poly (hydroxy fatty acid) polymer comprising one or more monomers selected from the group consisting of 4-hydroxyhexanoic acid, 5-hydroxyhexanoic acid, 4-hydroxyheptanoic acid and 4-hydroxyoctanoic acid.